PART III - CHANGES TO THE SPECIFICATION

Changes to Paragraph Commencing on Page 3 line 32 and ending on page 4 line 2:

The system is comprised of a personal hand held unit (controller), and a small, compact, and ~~cancelable~~ concealable unit (rover). Each controller unit gives the user the ability to ascertain the precise location of one or more rover units. In addition to all the functions and features of the system as described herein, the system is unique in that each controller unit is a self contained, mobile unit that can provide to the user all the real-time information necessary to locate and find any rover.

Changes to Paragraph commencing on Page 4 line 13 and ending on page 5 line 14.

To operate the system as a locator for a rover, the user selects the FIND feature on the controller screen. The screen displays all the pre-programmed rover names and location addresses such as cellular telephone numbers. The user selects a specific desired rover and touches GO on the interactive screen. The controller unit opens communication with the rover unit by cellular telephone. Using each unit's GPS module, the controller unit determines it's spatial relative relationship with the rover. In one display mode, the controller unit displays the rover unit's location on a street level map, which is capable of zooming and scrolling. Through continuing data from the rover unit, the rover unit's position is tracked on the map as GPS information is sent from the rover unit to the controller unit. In another display, the relative bearing location of the rover unit relative to the controller is displayed as an arrow accompanied by information. In order to obtain use of this arrow feature, a heading for the controller unit has to be established. Heading can also be established on an initiation basis by use of a compass without movement. ~~As is well known, GPS can only provide heading when the receiver is moving and receives sequential movements from the GPS satellites~~ As is well known, GPS can only provide heading when the receiver is moving. The arrow displays the bearing of the rover relative to the controller taking into account the location of the rover unit, the location of the controller unit, and the heading of the controller unit based on [[it's]] its GPS and optional digital compass data. The information displayed along with the arrow preferably includes controller unit to rover unit distance, rover unit velocity, rover unit height relative to the controller unit, the time at which the rover unit's data was ascertained and the rover unit's coordinate system location such as latitude, longitude and elevation. The arrow display is used primarily when the controller unit and the rover unit are relatively close, such as in a neighborhood, where a directional arrow is useful for the controller unit user. To implement these displays, the controller unit receives GPS data, which provides the relative spatial relationship of the controller unit and the rover unit to high precision, a good as 1 meter accuracy. In order to achieve this precise relative spatial relationship, the rover unit and the controller unit gather and share GPS measurements of pseudo range and carrier phase from the same GPS satellites. Much of the error in GPS positioning occurs due to errors that are common to the two receivers making measurements close in time and space. Therefore, having knowledge of the two receiver's GPS measurements allows for removal of the common errors and consequently, a precise calculation of the relative spatial orientation of the two units as well as good knowledge of the units' absolute position. Optionally, the bearing and distance information can be presented in an audible fashion.

Changes to Paragraph commencing on Page 7 line 29 and ending on page 8 line 2.

      Referring to Fig. 3, the controller unit is activated by a power-on step indicated as ~~start~~ START 50. This causes the display 52 to open. As shown on Fig. 12, this display, called the home screen 54 has buttons for PHONE 56, FIND 58, EXIT 60, ~~AND~~ and HOME 62 (which should be muted on the home screen 12). The user selects one of these as at step 64 on Fig. 3. PHONE selection allows use as at 68 as a conventional voice cell phone between the controller unit and a selected rover unit or as a general use cellular phone. EXIT selection turns off the controller unit as at 70. FIND selection begins the find procedure as at 72.

Changes to Paragraph commencing on Page 8 line 3 and ending on page 8 line 13.

Fig. 4 shows the procedure if the PHONE button 56 (Fig. 12) was touched. This opens the PHONE screen 74, Fig. 13, which has a scrollable list of preprogrammed numbers 76, an Up/DOWN scrolling button 78, a memory button 80, for adding or deleting numbers, a MANUAL button 82 for going to the screen of Fig. 14 for normal telephone use, and a home button 84 to return to the home HOME screen, Fig. 12. If the manual button 82 is touched, the screen 90 of Fig. 14 appears. It has a touch pad 92, a RECALL button 94, a CLEAR button 96, a SEND button 98, END button 100 and HOME button 92 102. The screens of Figs 13 and 14 are for programming numbers (Fig.13) and using the controller unit as a voice cellular telephone (Fig. 14). The use of the buttons on Fig. 14 are conventional to cellular telephones.

Changes to Paragraph commencing on Page 8 line 30 and ending on page 8 line 35.

With the FIND screen 110, displayed, the procedure shown in Fig. 7 is implemented. The scrollable NAME window 112 has a list of names and phone numbers that have been pre-programmed. The user now selects HOME 122, MEMORY 120, or GO, 124 116. If the MEMORY button 120 is touched, the FIND MEMORY procedure begins (Fig. 6) which allows programming or deleting on the NAME window 112.

Changes to Paragraph commencing on Page 9 line 1 and ending on page 9 line 5.

If the GO button 116 has been touched, the FIND DETAIL procedure of Fig. 8 is begun and the FIND DETAIL screen 130, Fig. 16, is displayed. As shown in Fig. 8, the FIND DETAIL procedure starts at 132 from the prior touching of the GO button 116 of the FIND screen of Fig. 15 to set up the FIND DETAIL screen 130 of Fig. 16.

Changes to Paragraph commencing on Page 9 line 6 and ending on page 9 line 9.

The FIND DETAIL screen 130 has an identification window ~~132~~ 134, a location and data window ~~134~~ 136, a geographical coordinates window ~~136~~ 138, a status window ~~138~~ 140, and buttons, HOME, ~~140~~ 142, CENTER, ~~142~~ 144, BREAD CRUMB, ~~144~~ 146, STORE, ~~146~~ 148, STOP ~~148~~ 150 and MAP, ~~150~~ 152.

Changes to Paragraph commencing on Page 9 line 10 and ending on page 9 line 14.

Within the ~~geographical coordinates screen~~ location data window 136, a reserve ~~152~~ 154 shows a bearing arrow ~~154~~ 156 which operates via the CENTER button ~~142~~ 144 for spatial relative positioning of the rover to the controller, in which the arrow 156 shows the bearing of the rover unit relative to the controller unit. This is accomplished using the electronic compass module (Fig. 1) or ~~radio position information such as GPS information to determine its heading.~~

Changes to Paragraph commencing on Page 9 line 15 and ending on page 9 line 18.

Touching the HOME button ~~140~~ 142, returns to screen Fig. 12. Touching the CENTER button ~~142~~ 144 activates display of the spatial relative position bearing arrow ~~154~~ 156, using the electronic compass and the GPS positions of the controller and the rover.

Changes to Paragraph commencing on Page 9 line 19 and ending on page 9 line 23.

_____The BREAD CRUMB button ~~144~~ 146 is used with the MAP button ~~150~~ 152 which will activate the MAP screen Fig. 17 and will show the positions of the controller and the rover on a map, and with the BREAD CRUMB feature activated, will show a number of prior GPS positions of the rover and will continue to display sequential periodic positions of the rover.

Part IV Claims tree.

The following is a claims tree presentation for the convenience of the Examiner. The official claims presentation is in Part II Claims.